

ABSTRACT

A fire retardant polymer composition is provided. The fire retardant polymer composition is formed of a polymer material, a plurality of monomers of a polycondensed partially hydrolyzed chelated metal oxide precursor, and at least one flame retardant constituent.

A process for making a flame retardant polymer composition is also presented. The process includes contacting a polymer material with a metal oxide sol comprising a liquid and a condensation product of a partially hydrolyzed chelated metal oxide precursor to form a mixture. The polymer material also is contacted with at least one flame retardant constituent. The polymer material is then polymerized or solidified.